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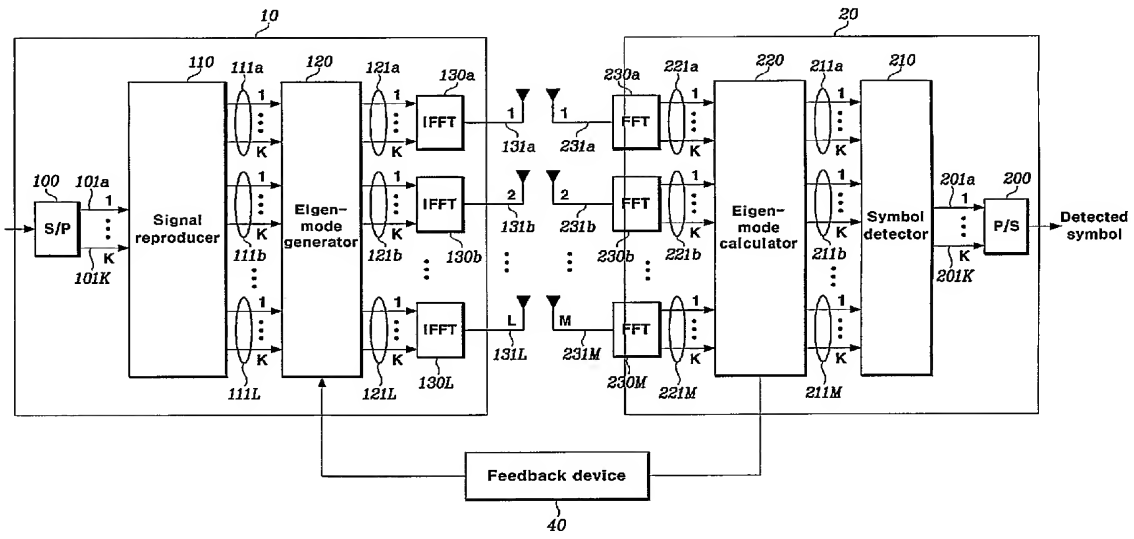
(54) Title: A MIMO-OFDM SYSTEM USING EIGENBEAMFORMING METHOD



(57) Abstract: Disclosed is a MIMO-OFDM system, wherein the transmitter comprises a serial/parallel converter for converting continuouslyinputted symbols of the number of subcarriers to K parallel signals; a signal reproducer for reproducing K parallel signals by the number of transmit antennas L an eigenmode generator for generating eigenbeam of the reproduced signals outputted from the signal reproducer at each subcarrier, on the basis of Nf eigenbeam forming vectors which are fed backlong-term and information of a best eigenbeam forming vector at each subcarrier which is fed back short-term, through the feedback device; and aplurality of inverse Fourier converters for receiving the signals outputted from the eigenmode generator and generating an OFDM symbol.

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